CORVUS SYSTEMS

Domestic Price List

MARCH 1981

"Intelligent Peripherals for Microcomputers"

CORVUS HARD DISK SYSTEMS

Personal Computer Disk Systems

A CORVUS personal computer disk system provides 6, 11, or 20 million bytes of unformatted storage. The price includes a single enclosure that contains a Winchester disk drive, a power supply, and an intelligent controller; an interface card with a 5 foot cable for the specified computer; system software; and an installation manual. Either a 110 or 220 volt model may be specified.

Model No.	Description	Suggested Retail Price
5xx	6.7 Mbytes (unformatted) disk system	$3,750.
11xx	11.3 Mbytes (unformatted) disk system	$5,350.
20xx	20.5 Mbytes (unformatted) disk system	$6,450.

xx = AL Compatible with Altos Computers operating under CP/M. (OASIS support available from PHASE ONE SYSTEMS).

= AM Compatible with the Alpha-Micro Computer. (AMOS 4.4A support available from DIASPAR DATA SYSTEMS).

= AP Compatible with Apple II Computer operating under DOS 3.3 or PASCAL.

= AT Compatible with Apple III Computer. Additional $145.00 charge for SOS operating system support.

= S Compatible with S-100 based computers operating under CP/M operating system. Available on 5¼ inch North Star or Vector Graphics mini-floppy or 8 inch single density IBM floppy disk. (OASIS support available from PHASE ONE SYSTEMS).

= SB Compatible with the Intertec Superbrain operating under CP/M.

= T Compatible with the TRS-80 Model I operating under NEWDOS80.

= TT Compatible with the TRS-80 Model II operating under CP/M. (OASIS support available from PHASE ONE SYSTEMS).

Personal Computer Add-on Disk Drives

A CORVUS personal computer add-on disk provides an additional 6, 11, or 20 million bytes of unformatted storage. The price includes a single enclosure that contains a Winchester disk drive and a power supply. A 110 or 220 volt model may be specified. A maximum of four disk drives can be daisy chained.

Model No.	Description	Suggested Retail Price
5D	6.7 Mbytes (unformatted) add-on disk drive	$3,450.
11D	11.3 Mbytes (unformatted) add-on disk drive	$4,950.
20D	20.5 Mbytes (unformatted) add-on disk drive	$5,950.

LSI-II Compatible Disk Systems

A DEC LSI-II compatible CORVUS disk system provides 5.2, 10.4, or 19.6 Mbytes of formatted storage. The price includes a single enclosure that contains a Winchester disk drive, a power supply, and an intelligent controller; a Quad-height interface board that emulates an RL01 or RL02 disk drive attached to the LSI-II Q-bus and a 5 foot cable. The disk system supports all DEC compatible operating systems. Either a 110 or 220 volt model may be specified.

Model No.	Description	Suggested Retail Price
5L	5.2 Mbytes (formatted) disk system (RL01)	$4,250.
11L	10.4 Mbytes (formatted) disk system (RL01 or RL02)	$5,850.
20L	19.6 Mbytes (formatted) disk system (RL01 or RL02)	$6,950.

CORVUS MIRROR BACKUP SYSTEM

The CORVUS MIRROR backup system is compatible with all CORVUS disk systems. It allows the disk system to interface with any standard video cassette recorder (purchased separately) for disk backup or archival data storage. The MIRROR price includes the interface hardware and software.

Model No.	Description	Suggested Retail Price
M/xx	MIRROR backup system hardware and software	$790.

xx = AP Compatible with Apple II under DOS or PASCAL.

xx = O Compatible with computers operating under OASIS operating system. Available on 8 inch single density IBM format floppy disk.

xx = RT Compatible with LSI-II under RT-11 operating system.

xx = S Compatible with computers operating under CP/M operating system.

xx = T Compatible with TRS-80 Model I under NEWDOS80 operating system.

To order a CORVUS disk system with MIRROR installed, specify /M after the disk model number (i.e., 11AP/M for Apple II).

CORVUS CONSTELLATION NETWORK SYSTEMS

Network Multiplexers

A CORVUS CONSTELLATION network multiplexer allows multiple computers to share a CORVUS hard disk system. The price includes the hardware and software for the specified computer.

Model No.	Description	Suggested Retail Price
C/HM	HOST multiplexer - Allows up to eight computers to share a CORVUS disk system. Specify computer type when ordering.	$750.
C/MM	MASTER multiplexer - Supports up to eight HOST multiplexers or computers, allowing up to 64 computers to share a CORVUS disk system. Power supply included. NOT AVAILABLE FOR LSI-II DISK SYSTEMS.	$1,050.

Network Interface Cards

A CORVUS CONSTELLATION network interface card allows a computer to attach to the CORVUS CONSTELLATION shared disk system. One interface card is required for each computer. One interface card with a 5 foot cable is supplied with the CORVUS hard disk system. Software is supplied with the HOST multiplexer.

Model No.	Computer type	card only	card w 5' cable	card w 15' cable	card w 30' cable	card w 50' cable
AL - (ft)	Altos computer	$220.	$235.	$250.	$275.	$300.
AM - (ft)	Alpha-Micro	220.	235.	250.	275.	300.
AP - (ft)	Apple II or III	220.	235.	250.	275.	300.
LC - (ft)	LSI-II	750.	765.	780.	805.	830.
SC - (ft)	S-100 Bus computer	220.	235.	250.	275.	300.
TC - (ft)	TRS-80 Model I	220.	235.	250.	275.	300.
TT - (ft)	TRS-80 Model II	220.	235.	250.	275.	300.

Network Cables

Cables to connect HOST multiplexers to the MASTER multiplexer and computer interface cards to multiplexers. Specify computer type when ordering.

Model No.	Description	5 ft cable	15 ft cable	30 ft cable	50 ft cable
C/MM - (ft)	HOST multiplexer to MASTER multiplexer cable.	$40.	$60.	$80.	$100.
C/C - (ft)	Computer interface card to multiplexer cable.	$40.	$60.	$80.	$100.

CORVUS DEMO KITS

A CORVUS demo kit includes a disk interface card for the selected computer, a 5 foot cable, and software that permits the use of the selected computer with a CORVUS hard disk system.

Model No.	Description	Suggested Retail Price
D/AL	Altos computer under CP/M operating system	$275.
D/AP	Apple II operating under DOS 3.3 or PASCAL	$275.
D/AT	Apple III under SOS operating system	$380.
D/L	LSI-II computer	$800.
D/S	S-100 based computers under CP/M operating system	$275.
D/T	TRS-80 Model I operating under NEWDOS80	$330.
D/TT	TRS-80 Model II operating under CP/M	$275.

CORVUS APPLE SOFTWARE

Model No.	Description	Suggested Retail Price
CS/AP	CONSTELLATION software for the Apple II under DOS or PASCAL that allows disk volume protection in a single computer configuration. Included with CONSTELLATION system.	$100.
U/AT	Software to upgrade an Apple II CORVUS disk system for use with an Apple III computer operating under the SOS operating system.	$145.

ACCESSORIES

Model No.	Description	Suggested Retail Price
VC/30	MAXELL EPITAXIAL VHS industrial quality video cassette tape (30 minute length, 25 Mbyte capacity).	$25.

CORVUS MANUALS

Model No.	Description	Suggested Retail Price
MAN/AP	CORVUS Disk System manual	$25.
MAN/S	CORVUS CP/M Utilities manual	$20.
MAN/M	CORVUS MIRROR Reference and Installation manual	$15.
MAN/C	CORVUS CONSTELLATION Network manual	$20.

EXTENDED WARRANTY

Extends the standard warranty (parts and labor coverage for 6 months) by 6, 12, or 24 months. Must be purchased while drive is still under warranty.

Model No.	Description	Suggested Retail Price
EW/6	Extends warranty by 6 months	$375.
EW/12	Extends warranty by 12 months	$700.
EW/24	Extends warranty by 24 months	$1,250.

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2029 O'Toole Avenue, San Jose, California 95131
Telephone (408) 946-7700 TWX 910-338-0226

CORVUS SYSTEMS

5, 10, AND 20 MEGABYTE DISK SYSTEMS FOR THE APPLE II AND III COMPUTERS

10 or 20 Megabyte System

5 Megabyte System

EXTEND YOUR APPLE LIMITS

Cost effective mass storage disk systems from Corvus give Apple computers the versatility to meet the rapidly changing needs of today's microcomputer applications.

Available in 5, 10, and 20 million byte versions, Corvus hard disk systems offer a wide choice in matching your data system requirements to your budget. Each version is completely compatible with the others. Up to three additional drives in any combination can be intermixed when adding storage capacity for future needs. All Corvus drives are also compatible with our CONSTELLATION backend network, which allows up to 64 Apples (II's and III's) to share the data base and peripherals, and with our MIRROR video tape backup.

Corvus disk systems for the Apple II are designated 5AP (5 megabyte), 11AP (10 megabyte) and 20 AP (20 megabyte). For the Apple III, they are the 5AT, 11AT, and 20AT.

CORVUS MASS STORAGE IS ECONOMICAL

Corvus disk systems, though requiring a higher initial investment than floppy disk drives, prove to be cost effective in many applications. For example, for the price of about eight single density diskette drives, you can get the capacity of 67 diskettes by purchasing a 10 megabyte Corvus disk system instead. And convenience, speed, and flexibility are greatly increased in addition. You now have the advantage of a centralized file with all your records on line for immediate access, plus the capability of 2 to 64 computers to share this centralized file with our CONSTELLATION network.

PROVEN WINCHESTER TECHNOLOGY

Corvus disk systems utilize proven Winchester technology. This technology employs low mass read/write heads that gently take off and land on the disk to dramatically improve system dependability. Low mass heads also reduce the head to surface distance thus allowing greater data capacity per rotational inch. To further improve reliability, the drive is installed in a sealed environment. A recirculating air system keeps dust, smoke, and other foreign particles from reaching the surface of the disk thus reducing the chances of soft errors.

CORVUS INTELLIGENT CONTROLLER

Corvus disk systems come equipped with a Corvus intelligent controller. This is a Z-80 microprocessor that provides fast performance coupled with low software overhead for your Apple computer.

Designed-in features of the Corvus controller are: Read after Write, automatic retrys, sector buffering, error statistical monitoring and diagnosis, transparent formatting with CRC error detection, and high speed data transfer utilizing DMA (direct memory access).

Up to three add-on drives in any combination of 5, 10, or 20 megabyte can be controlled by the Corvus intelligent controller. Thus total data storage can range from 5 to 80 megabytes.

CORVUS SOFTWARE

The ROM-resident software is interfaced to the DOS 3.3 basics operating system, the Apple PASCAL operating system, and the new Sophisticated Operating System (SOS). In all three systems all disk drives (Apple supplied floppy and/or a Corvus drive) are on-line simultaneously. The operating systems remain unmodified at all times for 100% application compatibility. Data from any of the operating systems may reside on a single drive.

DOS 3.3. The DOS 3.3 interface treats all or part of the drive as multiple images of a standard diskette. The DOS syntax intended for volume checking is used to specify which volume to access. Up to 67 of these volumes are on-line at once. A special command "CATALOG, V99" displays a master directory of all volumes. Volumes may be independently write protected at will. A complete 48 kilobyte bootstrap load containing any application can be performed at power-up or any time using the standard Apple boot procedure.

APPLE PASCAL. The Apple PASCAL interface features flexible management of the disk space. Up to 63 volumes of any size may reside on the disk. These volumes can be created, removed, or write protected at any time. The drive may be configured as one 10 megabyte volume if the user wishes. Any UCSD/Apple PASCAL program may utilize the 10 megabytes with no modification.

UTILITIES. Corvus disk systems come with over a dozen utility programs to make your use of the disk easier. These include programs to copy Corvus volumes from and to floppy diskettes, utilities to format new volumes, programs to switch between basics and PASCAL, and many more. A volume manager utility is provided that contains most of the same commands as the PASCAL filer except that they operate on Corvus volumes instead of files.

SERVICE

Corvus 5, 10, and 20 megabyte disk systems come with a six (6) month parts and labor warranty. An extended warranty is available as an extra cost. Corvus disk systems require no preventive maintenance. If your Corvus drive should require service, it may be taken to any one of our Authorized Service Centers, located throughout the world.

SPECIFICATIONS

DATA ORGANIZATION	5 MB	10 MB	20 MB
Capacity (megabytes)			
Unformatted	6.7	11.0	20.0
Formatted	5.7	10.5	18.6
Disks			
Number	2	2	3
Data Surfaces	4	3	5
Diameter (inches/centimeters)	5.25/13.3	8/20.32	8/20.32

PERFORMANCE	5 MB	10/20 MB
Access Times (milliseconds)		
Minimum	43	10
Maximum	240	80
Average	125	40
Latency Time Average (milliseconds)	6.25	8
Disk Rotational Speed (RPM)	4,800	3,600
Peak Transfer Rate (kilobytes/second)	425	425

PHYSICAL DIMENSIONS	5 MB	10/20 MB
Height (inches/centimeters)	5.3/13.5	6.375/16.19
Width (inches/centimeters)	14.5/36.8	14.50/36.83
Depth (inches/centimeters)	15.0/38.1	23.00/58.42

ENVIRONMENTAL SPECIFICATIONS	
Temperature	
Operating (F/C)	50° to 120°/10° to 50°
Non-operating	-40° to 140°/-40° to 60°
Variation	18°F per hour
Humidity (non-condensing)	
Operating	20 to 80%
Non-operating	10 to 90%
Altitude, Operating (feet/meters)	-1,000 to 6,000/-350 to 1,830

POWER REQUIREMENTS	
Voltage	117 or 220/240 volts (switch selectable), 50/60 Hz, single phase alternating current
Consumption	5 MB: 125 volt amperes 10/20 MB: 250 volt amperes

Corvus reserves the right to change specifications without notice or obligation.

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